

REMARKS

Applicant respectfully requests consideration of the subject application as amended herein. This Amendment is submitted in response to the Office Action mailed September 6, 2005. Claims 1-13, 29, 36 and 37 have been withdrawn. Claims 30-35 are rejected. In this Amendment, no claims have been amended or canceled.

Rejections under 35 U.S.C. § 102(b)

The Examiner has rejected claims 30-33 under 35 U.S.C. §102(b) as being anticipated by Oda, et al., (USPN 3,967,004, hereinafter “Oda”). As discussed below, the pending claims are patentable over the above reference.

Applicant respectfully disagrees with the Examiner that Oda anticipated Applicant's claimed invention. Oda did not teach each and every element of claims 30-33. In fact, Oda did not even teach a method remotely similar to claims 30-33.

Claim 30-33 pertains to a method that assemble a structure onto a substrate comprising creating a slurry comprising a fluid and a plurality of elements, each of which is designed to mate with a receptor region on said substrate and each of which comprises a functional element; and projecting said slurry through a nozzle toward said substrate.”

Oda disclosed a method of forming a fiber-reinforced resin. Oda's method includes spraying a mixture that includes (1) a thickening agent dissolved or suspended in a liquid polyester resin and (2) an unsaturated polyester resin composition onto a suitable substrate. The substrate in Oda did not include any individual receptor region (or opening) as taught by Applicant's invention and that each one of the functional element is designed to mate with

one individual receptor region. The functional element in Applicant's invention is thus shaped so that it can fit or mate complimentarily to an opening. The Examiner compared the entire substrate in Oda to a receptor region as recited in claims 30-33 and opined that the entire substrate acts as the receptor region. If that is the case, all of the particles in the mixture (1) and (2) are dispensed onto the one area, and one receptor region. This is entirely different from Applicant's claimed invention. Additionally, each individual element in the mixture (1) and (2) are NOT designed to mate with one receptor region.

To designed to mate with one receptor region (e.g., opening) provided on the substrate, Applicant's Specification taught that the element has a complimentary shape so that the element can self assemble into the receptor region, for instance, by controlling the fit between the element and the opening (the receptor region), it is possible to have the elements self assemble into the openings. There is no such self-assembly into any opening or receptor region on the substrate in Oda.

Furthermore, the plurality of elements recited in claims 30-33 required that each comprises a functional element, for example, an active circuitry. The particles in the mixture in Oda do not possess such functional element characteristic.

Additionally, Oda did not teach projecting a second fluid through a nozzle toward the substrate as recited in claims 30-33 and 34-35.

Therefore, Applicant respectfully submits that Oda did not teach each and every element of claims 30-33.

Claims 30-32, 34 and 35 are rejected under 35 U.S.C. §102(b) as being anticipated by Van Roeyen, (USPN 4,397,325, hereinafter "Van Roeyen"). As discussed below, the pending claims are patentable over the above reference.

Applicant respectfully disagrees with the Examiner that Van Roeyen anticipated

Applicant's claimed invention. Van Roeyen did not teach each and every element of claims 30-33. In fact, Van Roeyen did not even teach a method remotely similar to claims 30-33 and 34-35.

Claim 30-33 pertains to a method that assemble a structure onto a substrate comprising creating a slurry comprising a fluid and a plurality of elements, each of which is designed to mate with a receptor region on said substrate and each of which comprises a functional element; and projecting said slurry through a nozzle toward said substrate."

Van Roeyen disclosed a method of forming, coating, drying, and treating a plurality of nails. Figures 6A-6B of Van Roeyen disclosed a process of forming nails, coating, drying, and treating the nails. The nails are formed in files from a strip 25 using a stamping method. A strip 25 having a plurality of nails projecting therefrom is then subjected to successive steps of cleaning, coating, and drying. For example, the nails (blanks 28) are immesersed in a tank 29 filled with a washing solution. Then, the nails are sprayed with a coating solution such as a slurry 31. Several cleaning, drying, and coating steps also occur to finally form the nails shown in Figure 6B.

Van Roeyen did not teach anything remotely related to a slurry having a plurality of elements each of which comprising a functional element, and dispensing such slurry onto a substrate provided with receptor region and that each of the element is designed to mate with a receptor region.

Van Roeyen is thus entirely different from and unrelated to Applicant's claimed invention. Additionally, each nail is NOT designed to mate with one receptor region on a substrate and no slurry is used to allow them to be dispensed on the substrate and mate with the receptor region.

To designed to mate with one receptor region (e.g., opening) provided on the

substrate, Applicant's Specification taught that the element has a complimentary shape so that the element can self assemble into the receptor region, for instance, by controlling the fit between the element and the opening (the receptor region), it is possible to have the elements self assemble into the openings. There is no such mating of functional element into any opening or receptor region on the substrate in Van Roeyen.

Furthermore, the plurality of elements recited in claims 30-33 and 34-35 required that each comprises a functional element, for example, an active circuitry. The nails in Van Roeyen do not possess such functional element characteristic.

Additionally, Van Roeyen did not teach projecting a second fluid through a nozzle toward the substrate as recited in claims 30-33 and 34-35.

Therefore, Applicant respectfully submits that Van Roeyen did not teach each and every element of claims 30-33 and 34-35.

Rejections under 35 U.S.C. § 103(a)

The Examiner has rejected claims 34 and 35 under 35 U.S.C. §103(a) as being unpatentable over Van Roeyen in view of Dudek, et al. (USPN 5,167,989, hereinafter "Dudek"). As discussed below, the pending claims are patentable over the above reference.

As previously discussed, Van Roeyen did not teach any of the limitations in claims 34-35. Van Roeyen disclosed a method of forming, coating, drying, and treating a plurality of nails. Figures 6A-6B of Van Roeyen disclosed a process of forming nails, coating, drying, and treating the nails. The nails are formed in files from a strip 25 using a stamping method. A strip 25 having a plurality of nails projecting therefrom is then subjected to successive steps of cleaning, coating, and drying. For example, the nails (blanks 28) are immersed in a tank 29 filled with a washing solution. Then, the nails are sprayed with a coating solution such as a slurry 31. Several cleaning, drying, and coating steps also occur to finally form the

nails shown in Figure 6B. Van Roeyen did not teach anything remotely related to a slurry having a plurality of elements each of which comprising a functional element, and dispensing such slurry onto a substrate provided with receptor region and that each of the element is designed to mate with a receptor region.

Van Roeyen is thus entirely different from and unrelated to Applicant's claimed invention. Additionally, each nail is NOT designed to mate with one receptor region on a substrate and no slurry is used to allow them to be dispensed on the substrate and mate with the receptor region.

Therefore, even if Dudek taught the art of attaching a particulate coating material to a substrate wherein the excess particles are removed by wiping, blowing with a gas, Dudek could not be combined with Van Roeyen to get the elements claimed in claims 34-35.

Therefore, Applicant respectfully submits that Van Roeyen and Dudek did not make obvious claims 34-35.

Claims 30, 31, and 33 are rejected under 35 under 35 U.S.C. §103(a) as being unpatentable over Smith, et al. (USPN 5,545,291, hereinafter "Smith") in view of DiMaio, et al., (USPN 5,403,624, hereinafter "DiMaio").

Smith disclosed a method of fluidic self-assembly that includes dispensing a slurry comprising elements onto a substrate. Smith lacked projecting a second fluid through a nozzle toward the substrate. The Examiner believed that DiMaio taught projecting a second fluid through a nozzle toward a substrate and as such can be combined with Smith to get the elements of claims 30, 31, and 33. Applicant respectfully disagrees.

DiMaio pertained to a method of applying a coating to fasteners using a spray nozzle that is particularly effective with power coatings. DiMaio also taught that a plurality of spray

nozzles can be used to provide more uniform coating with an increased production rate.

DiMaio thus aimed at more coverage for coating the fasteners.

Applicant's claimed invention as recited in claims 30, 31, and 33, provide a method of applying a second fluid through a nozzle toward the substrate in addition to the dispensing the slurry comprising the elements over the substrate. Smith did not teach, suggest, or motivate the need for a second fluid to be dispensed by a nozzle. There would have been no motivation or suggestion to combine DiMaio to Smith. One of ordinary skill in the art would have not combined DiMaio and Smith to dispense a slurry comprising a first fluid and a plurality of elements, each of which is designed to mate with a receptor region on said substrate and each of which comprises a functional element; and projecting a second fluid through a nozzle toward said substrate as recited in claim 30.

Furthermore, both DiMaio and Smith did not teach projecting a second fluid in addition to dispensing the first fluid that has the elements. Therefore, there would have been no motivation or suggestion to combine Smith and DiMaio to get the element of claim 31, where the first fluid and said second fluid comprise the same solvent. Even if the first fluid and the second fluid are the same solvent, DiMaio combined to Smith did not cure the lack of projecting a second fluid in combination with dispensing a first fluid that has the elements. Additionally, even if the first fluid is dispensed and the second fluid is projected at the same time, as recited in claim 33, "wherein said second fluid is projected toward said substrate while said plurality of elements mates with receptor regions," DiMaio and Smith could not be combined to get the limitations.

Therefore, Applicant respectfully submits that Smith and DiMaio did not make obvious claims 30, 31, and 33.

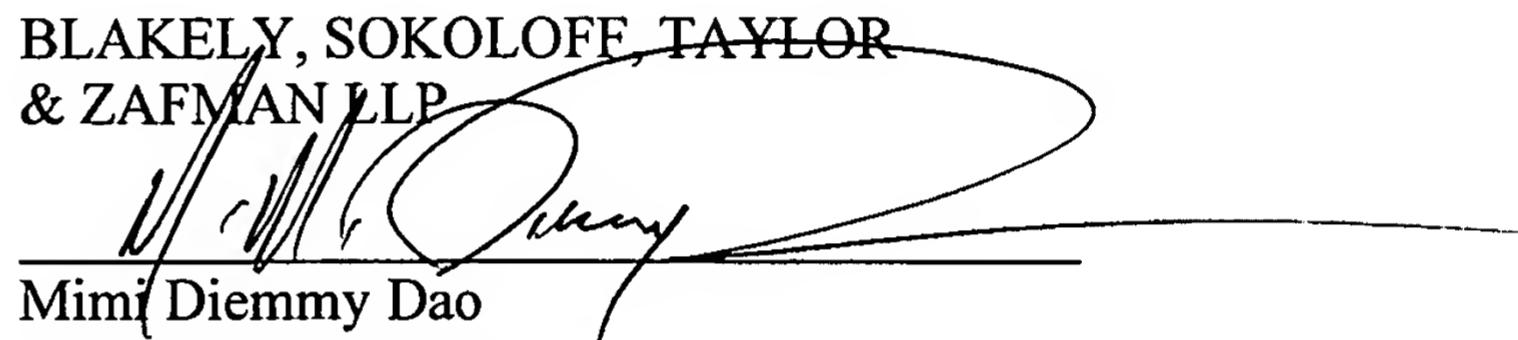
If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Mimi Dao at (408) 720-8300.

Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR
& ZAFMAN LLP


Mimi Diemmy Dao
Attorney for Applicant
Registration No. 45,628

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12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(408) 720-8300